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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,626	07/26/2000	William C.Y. Lee	139.136USU1	8528

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GATES & COOPER LLP
HOWARD HUGHES CENTER
6701 CENTER DRIVE WEST, SUITE 1050
LOS ANGELES, CA 90045

EXAMINER

RAMPURIA, SHARAD K

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/625,626	LEE ET AL.	
	Examiner	Art Unit	
	Sharad Rampuria	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-25 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Applicant's arguments with respect to claims 1-10, 12-25 & 27-30 have been considered but are moot in view of the new ground(s) of rejection.

Claims 11 & 26 are cancelled.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6, 13-16, 18, 20-21, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tayloe et al. in view of Chang et al.

1. Regarding Claim 1, Tayloe disclosed A method for operating a wireless network (abstract), comprising:

(a) collecting and analyzing information from the wireless network into a collection and analysis system (OMCU; 116; Fig.1; Col.5; 25-39), wherein the information includes location

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information on mobile transceivers operating within the network; (Col.5; 53-65, & col.3; 51-60) and

Tayloe fails to disclosed intelligently forming radio frequency (RF) signal beams. However, Chang teaches in an analogous art, that (b) optimizing the wireless network's operation from a network control system by intelligently forming radio frequency (RF) signal beams using the collected and analyzed information. (col.5; 40-col.6; 11, col.6; 24-61) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include intelligently forming radio frequency (RF) signal beams in order to provide multi-beam adaptive antenna arrays in which the communication channel follows the mobile unit.

3. Regarding Claim 3, Tayloe disclosed The method of claim 1, wherein the information further includes one or more types of information selected from a group comprising Hand Off (HO) information, Power information, Measurements, and System Parameters from the wireless network. (col.4: 51-col.5; 5)

5. Regarding Claim 5, Tayloe disclosed The method of claim 1, wherein the optimizing step further comprises dynamically allocating radio frequency (RF) signal power in the wireless network based on the collected and analyzed information (Col.5; 1-5).

6. Regarding Claim 6, Tayloe disclosed The method of claim 5, wherein the dynamically allocating step further comprises dynamically assigning radio frequency (RF) signal power to cells, sectors within cells, and mobile transceivers based on the collected and analyzed information (Col.5; 1-5 & col.6; 9-15).

13. Regarding Claim 13, Tayloe disclosed The method of claim 1, further comprising identifying and resolving problems using the collected and analyzed information. (Col.5: 40-52)

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14. Regarding Claim 14, Tayloe disclosed The method of claim 13, wherein the identifying and resolving step further comprises identifying problems in the wireless network, and correlating the identified problems with the collected and analyzed information. (Col.5: 40-52)

15. Regarding Claim 15, Tayloe disclosed The method of claim 14, wherein the correlating step further comprises correlating the identified problems with mobile transceiver location information from the collected and analyzed information. (Col.5: 40-52)

16. Regarding Claim 16, Tayloe disclosed A system for operating a wireless network (abstract), comprising:

(a) collecting and analyzing information from the wireless network into a collection and analysis system (OMCU; 116; Fig.1; Col.5; 25-39), wherein the information includes location information on mobile transceivers operating within the network; (Col.5; 53-65, & col.3; 51-60) and

Tayloe fails to disclose intelligently forming radio frequency (RF) signal beams. However, Chang teaches in an analogous art, that (b) a network control system, coupled to the wireless communication systems and the data collection and filter system, for optimizing the wireless network's operation by intelligently forming radio frequency (RF) signal beams using the collected and analyzed information. (col.5; 40-col.6; 11, col.6; 24-61) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include intelligently forming radio frequency (RF) signal beams in order to provide multi-beam adaptive antenna arrays in which the communication channel follows the mobile unit.

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18. Regarding Claim 18, Tayloe disclosed The system of claim 16, wherein the information further includes one or more types of information selected from a group comprising Hand Off (HO) information, Power information, Measurements, and System Parameters from the wireless network. (col.4: 51-col.5; 5)

20. Regarding Claim 20, Tayloe disclosed The system of claim 16, wherein the optimizing step further comprises dynamically allocating radio frequency (RF) signal power in the wireless network based on the collected and analyzed information (Col.5; 1-5).

21. Regarding Claim 21, Tayloe disclosed The system of claim 16, wherein the dynamically allocating step further comprises dynamically assigning radio frequency (RF) signal power to cells, sectors within cells, and mobile transceivers based on the collected and analyzed information (Col.5; 1-5 & col.6; 9-15).

28. Regarding Claim 28, Tayloe disclosed The system of claim 16, further comprising identifying and resolving problems using the collected and analyzed information. (Col.5: 40-52)

29. Regarding Claim 29, Tayloe disclosed The system of claim 28, wherein the identifying and resolving step further comprises identifying problems in the wireless network, and correlating the identified problems with the collected and analyzed information. (Col.5: 40-52)

30. Regarding Claim 30, Tayloe disclosed The system of claim 29, wherein the correlating step further comprises correlating the identified problems with mobile transceiver location information from the collected and analyzed information. (Col.5: 40-52)

Claims 2, 4, 7-10, 17, 19, 22, & 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tayloe et al. & Chang et al. further in view of Montoya.

2. Regarding Claim 2, the above combination disclosed disclosed all the particulars of the claim except E911 location information. However, Montoya teaches in an analogous art, that The method of claim 1, wherein the location information comprises E911 location information. (Col.2; 47-50 & col.6; 51-59) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include E911 location information in order to locate the mobile unit with a high level of certainty.

4. Regarding Claim 4, the above combination disclosed disclosed all the particulars of the claim except wherein the information is collected when certain defined thresholds are triggered. However, Montoya teaches in an analogous art, that The method of claim 1, wherein the information is collected when certain defined thresholds are triggered. (col.5; 53-col.6; 8) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include wherein the information is collected when certain defined thresholds are triggered in order to improve a handoff threshold between two cells.

7. Regarding Claim 7, the above combination disclosed disclosed all the particulars of the claim except setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information. However, Montoya teaches in an analogous art, that The method of claim 1, wherein the optimizing step further comprises setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information. (col.6: 10-19) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include setting dynamic dedicated handoff (HO)

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thresholds for individual mobile transceivers based on the collected and analyzed information in order to improve a handoff threshold between two cells.

8. Regarding Claim 8, the above combination disclosed all the particulars of the claim except the individual mobile transceivers each have a unique, assigned HO (hand off) threshold.

However, Montoya teaches in an analogous art, that The method of claim 7, wherein the individual mobile transceivers each have a unique, assigned HO (hand off) threshold. (col.6: 10-19) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the individual mobile transceivers each have a unique, assigned HO (hand off) threshold in order to improve a handoff threshold between two cells.

9. Regarding Claim 9, the above combination disclosed all the particulars of the claim except performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location. However, Montoya teaches in an analogous art, that The method of claim 8, wherein the optimizing step further comprises performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location. (col.6: 10-19) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location in order to improve a handoff threshold between two cells.

10. Regarding Claim 10, the above combination disclosed all the particulars of the claim except the performing step comprises performing handoffs for individual mobile transceivers in order to minimize interference levels. However, Montoya teaches in an analogous art, that The method of claim 9, wherein the performing step comprises performing handoffs for

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individual mobile transceivers in order to minimize interference levels. (col.6: 34-50) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the performing step comprises performing handoffs for individual mobile transceivers in order to minimize interference levels in order to improve a handoff threshold between two cells.

17. Regarding Claim 17, the above combination disclosed disclosed all the particulars of the claim except E911 location information. However, Montoya teaches in an analogous art, that The system of claim 16, wherein the location information comprises E911 location information.

(Col.2; 47-50 & col.6; 51-59) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include E911 location information in order to locate the mobile unit with a high level of certainty.

19. Regarding Claim 19, the above combination disclosed disclosed all the particulars of the claim except wherein the information is collected when certain defined thresholds are triggered.

However, Montoya teaches in an analogous art, that The system of claim 16, wherein the information is collected when certain defined thresholds are triggered. (col.5; 53-col.6; 8)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include wherein the information is collected when certain defined thresholds are triggered in order to improve a handoff threshold between two cells.

22. Regarding Claim 22, the above combination disclosed disclosed all the particulars of the claim except setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information. However, Montoya teaches in an analogous art, that The system of claim 16, wherein the optimizing step further comprises setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the

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collected and analyzed information. (col.6: 10-19) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information in order to improve a handoff threshold between two cells.

23. Regarding Claim 23, the above combination disclosed all the particulars of the claim except the individual mobile transceivers each have a unique, assigned HO (hand off) threshold. However, Montoya teaches in an analogous art, that The system of claim 22, wherein the individual mobile transceivers each have a unique, assigned HO (hand off) threshold. (col.6: 10-19) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the individual mobile transceivers each have a unique, assigned HO (hand off) threshold in order to improve a handoff threshold between two cells.

24. Regarding Claim 24, the above combination disclosed all the particulars of the claim except performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location. However, Montoya teaches in an analogous art, that The system of claim 23, wherein the optimizing step further comprises performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location. (col.6: 10-19) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location in order to improve a handoff threshold between two cells.

25. Regarding Claim 25, the above combination disclosed all the particulars of the claim except the performing step comprises performing handoffs for individual mobile

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transceivers in order to minimize interference levels. However, Montoya teaches in an analogous art, that The system of claim 24, wherein the performing step comprises performing handoffs for individual mobile transceivers in order to minimize interference levels. (col.6: 34-50) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the performing step comprises performing handoffs for individual mobile transceivers in order to minimize interference levels in order to improve a handoff threshold between two cells.

Claims 12 & 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tayloe et al. & Chang et al. further in view of Bell et al.

12. Regarding Claim 12, the above combination disclosed all the particulars of the claim except steering an RF signal beam. However, Bell teaches in an analogous art, that The method of claim 11, wherein the intelligently forming step further comprises steering an RF signal beam in the direction of one or more mobile transceivers based on the collected and analyzed information. (Col.2: 50-61, col.4; 20-28) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include steering an RF signal beam in order to provide steerable technology to form a direct antenna beam.

27. Regarding Claim 27, the above combination disclosed all the particulars of the claim except steering an RF signal beam. However, Bell teaches in an analogous art, that The system of claim 26, wherein the intelligently forming step further comprises steering an RF signal beam in the direction of one or more mobile transceivers based on the 5collected and analyzed information. (Col.2: 50-61, col.4; 20-28) Therefore, it would have been obvious to one of ordinary skill in the

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art at the time of invention to include steering an RF signal beam in order to provide steerable technology to form a direct antenna beam.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is 703-308-4736. The examiner can normally be reached on Mon-Thu.(8:00-5:30) alternate Fri.(8:00-4:30). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or EBC@uspto.gov.

Sharad Rampuria
Examiner
Art Unit 2683

28 December 2004



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600